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FORM PTO 1449
(REV 2-32)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

File No. 97-44D1

Serial No.
10/091,166

Applicant(s):

David A. Adler, James L. Holloway,
Nand Bairdur, Stephanie Beigel-Orme,
Paul O. SheppardFiling Date: Group: 1653
March 5, 2002

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

Examiner Initial	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A1 95/32287	11/30/95	PCT			
	A2 99/06554	02/11/99	PCT			
	A3 00/07612	02/17/00	PCT			
	A4 00/46245	08/10/00	PCT			
	A5 01/42467	06/14/00	PCT			
	A6 02/04487	01/17/02	PCT			
	A7 02/40512	05/23/02	PCT			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Patents, etc.)

<i>Jay</i>	A8	Jia et al., "Discovery of new human beta-defensins using a genomics-based approach," <u>Gene</u> , <u>263</u> (1-2):211-218 (Jan. 2001).
	A9	Lehrer et al. "Defensins: antimicrobial and cytotoxic peptides of mammalian cells," <u>Annu Rev Immunol.</u> , <u>11</u> :105-128 (1993). Review.
	A10	Harder et al. "A peptide antibiotic from human skin," <u>Nature</u> , <u>387</u> (6636):861 (June 26, 1997).
	A11	Incyte Pharmaceuticals, Inc. clone, 1996:INC1433022.
<i>DP</i>	A12	Incyte Pharmaceuticals, Inc. LIBRARY, 1996:BEPINON01.

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Date considered

11/19/04

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<i>Off</i>	A13		Incyte Pharmaceuticals, Inc. LIBRARY, 1996: LPARNOT02.			
<i>Off</i>	A14		Selsted et al., "Purification, primary structures, and antibacterial activities of beta-defensins, a new family of antimicrobial peptides from bovine neutrophils," <i>J Biol Chem.</i> , 268(9):6641-6648 (March 25, 1993).			
<i>Off</i>	A15		Bensch et al., "hBD-1: a novel beta-defensin from human plasma," <i>FEBS Lett.</i> , 368(2):331-335 (July 17, 1995).			
<i>Off</i>	A16		Bowie et al., "Deciphering the message in protein sequences: tolerance to amino acid substitutions," <i>Science</i> , 247(4948):1306-1310 (March 16, 1990).			
<i>Off</i>	A17		Wells, J.A., "Additivity of mutational effects in proteins," <i>Biochemistry</i> , 29(37):8509-8517 (Sept. 18, 1990).			
<i>Off</i>	A18		Liu et al., "Structure and mapping of the human beta-defensin HBD-2 gene and its expression at sites of inflammation," <i>Gene</i> , 222(2):237-244 (Nov. 19, 1998).			
<i>Off</i>	A19		Porter et al., "Broad-spectrum antimicrobial activity of human intestinal defensin 5," <i>Infect Immun.</i> , 65(6):2396-2401 (June 1997).			
<i>Off</i>	A20		Daher et al., "Direct inactivation of viruses by human granulocyte defensins," <i>J Virol.</i> , 60(3):1068-1074 (Dec. 1986).			

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Julie E. Blod

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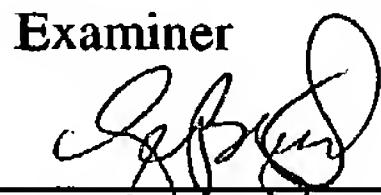
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JAB	A21		Martin et al., "Defensins and other endogenous peptide antibiotics of vertebrates," <u>J Leukoc Biol.</u> , 58(2):128-136 (Aug. 1995). Review.
JAB	A22		Ouellette et al., "Paneth cell defensins: endogenous peptide components of intestinal host defense," <u>FASEB J.</u> , 10(11):1280-1289 (Sept. 1996). Review.
JAB	A23		Lichtenstein et al., "In vitro tumor cell cytosis mediated by peptide defensins of human and rabbit granulocytes," <u>Blood</u> , 68(6):1407-1410 (Dec. 1986).
JAB	A24		Zhu et al., "Isolation and structure of corticostatin peptides from rabbit fetal and adult lung," <u>Proc Natl Acad Sci U S A.</u> , 85(2):592-596 (Jan. 1988).
JAB	A25		Territo et al., "Monocyte-chemotactic activity of defensins from human neutrophils," <u>J Clin Invest.</u> , 84(6):2017-2020 (Dec. 1989).
JAB	A26		Tamura et al., "A marked decrease in defensin mRNA in the only case of congenital neutrophil-specific granule deficiency reported in Japan," <u>Int J Hematol.</u> , 59(2):137-142 (Feb. 1994).
JAB	A27		Higazi et al., "Defensin modulates tissue-type plasminogen activator and plasminogen binding to fibrin and endothelial cells," <u>J Biol Chem.</u> , 271(30):17650-5 (July 26, 1996).
JAB	A28		Yang et al., "Mammalian defensins in immunity: more than just microbicidal," <u>Trends Immunol.</u> , 23(6):291-6 (June 2002).

Examiner



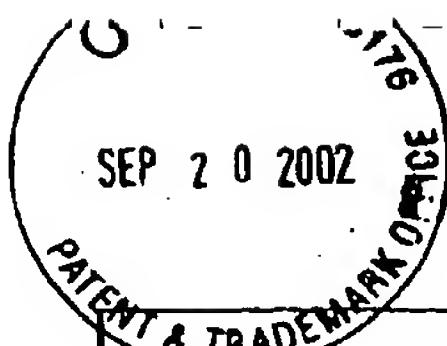
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JAB	A29		Circo et al., "Structural and functional characterization of hBD-1(Ser35), a peptide deduced from a DEFB1 polymorphism," <u>Biochem Biophys Res Commun.</u> , 293(1):586-92 (April 26, 2002).				
	A30		Schibli et al., "The solution structures of the human beta-defensins lead to a better understanding of the potent bactericidal activity of HBD3 against <i>Staphylococcus aureus</i> ," <u>J Biol Chem.</u> , 277(10):8279-89 (March 8, 2002).				
	A31		Harder et al., "Isolation and characterization of human beta -defensin-3, a novel human inducible peptide antibiotic," <u>J Biol Chem.</u> , 276(8):5707-13 (Feb. 23, 2001).				
	A32		Goldman et al., "Human beta-defensin-1 is a salt-sensitive antibiotic in lung that is inactivated in cystic fibrosis," <u>Cell</u> , 88(4):553-60 (Feb. 21, 1997).				
	A33		Smith et al., "Cystic fibrosis airway epithelia fail to kill bacteria because of abnormal airway surface fluid," <u>Cell</u> , 85(2):229-36 (April 19, 1996).				
	A34		Davies et al., "CFTR gene transfer reduces the binding of <i>Pseudomonas aeruginosa</i> to cystic fibrosis respiratory epithelium," <u>Am J Respir Cell Mol Biol.</u> , 16(6):657-63 (June 1997).				
JAB	A35		Dunsche et al., "The novel human beta-defensin-3 is widely expressed in oral tissues," <u>Eur. J. Oral. Sci.</u> , 109:121-124 (2002).				

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<i>David E. Beff</i>	11/19/04

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JL	A36		Cullor et al., "In vitro antimicrobial activity of defensins against ocular pathogens," <u>Arch Ophthalmol.</u> , 108(6):861-864 (June 1990).
JL	A37		Schwab et al., "Corneal storage medium preservation with defensins," <u>Cornea</u> , 11(5):370-375 (Sept. 1992).
JL	A38		Yeh et al., "Single-dose pharmacokinetics of indinavir and the effect of food," <u>Antimicrob Agents Chemother.</u> , 42(2):332-338 (Feb. 1998).
JL	A39		Haynes et al., "Innate defence of the eye by antimicrobial defensin peptides," <u>Lancet</u> , 352(9126):451-452 (Aug. 8, 1998).
JL	A40		Haynes et al., "Antimicrobial defensin peptides of the human ocular surface," <u>Br J Ophthalmol.</u> , 83(6):737-41 (June 1999).
JL	A41		Sawicki et al., "Contraceptive potential of peptide antibiotics," <u>Lancet</u> , 353(9151):464-5 (Feb. 6, 1999).
JL	A42		Garcia et al., "Identification of a novel, multifunctional beta-defensin (human beta-defensin 3) with specific antimicrobial activity. Its interaction with plasma membranes of <i>Xenopus</i> oocytes and the induction of macrophage chemoattraction," <u>Cell Tissue Res.</u> , 306(2):257-64 (Nov. 2001).

Examiner <i>John E. Brey</i>	Date considered <i>11/19/04</i>
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<i>[Signature]</i>	A43		Zasloff, M., "Antimicrobial peptides of multicellular organisms," <u>Nature</u> , <u>415</u> :389-395 (Jan. 2002).
<i>[Signature]</i>	A44		Krisanaprakornkit et al., "Regulation of human beta-defensin-2 in gingival epithelial cells: the involvement of mitogen-activated protein kinase pathways, but not the NF-kappaB transcription factor family," <u>J Immunol.</u> , <u>168</u> (1):316-324 (Jan. 1, 2002).
<i>[Signature]</i>	A45		Garcia et al., "Human beta-defensin 4: a novel inducible peptide with a specific salt-sensitive spectrum of antimicrobial activity," <u>FASEB J.</u> , express article 10.1096/fj.00-0865fje, published online on June 18, 2001.
<i>[Signature]</i>	A46		Duits et al., "Inhibition of hBD-3, but not hBD-1 and hBD-2, mRNA expression by corticosteroids," <u>Biochem Biophys Res Commun.</u> , <u>280</u> (2):522-525 (Jan. 2001).
<i>[Signature]</i>	A47		Hancock et al., "Antibiotic resistance in <i>Pseudomonas aeruginosa</i> : mechanisms and impact on treatment," <u>Drug Resist Updat.</u> , <u>3</u> (4):247-255 (Aug. 2000).
<i>[Signature]</i>	A48		Biragyn et al., "DNA vaccines encoding human immunodeficiency virus-1 glycoprotein 120 fusions with proinflammatory chemoattractants induce systemic and mucosal immune responses," <u>Blood</u> , <u>100</u> (4):1153-1159 (Aug. 15, 2002).

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